





PUBLIC OPINION SURVEY ON CANNABIS LEGALIZATION

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ABSTRACT

Introduction: Cannabinoids are natural compounds present in plants of the cannabis family. The most important cannabinoids from a medical perspective are THC (tetrahydrocannabinol) and CBD (cannabidiol). The correct dose and appropriate frequency of application are successful in using cannabis as a medicine for medical purposes.

Aim: To gain a deeper understanding of the attitudes and thoughts of society on the legalization of cannabis in BiH, with a special emphasis on the prejudices that have developed through the influence of the legal and social system. Also, the aim is to determine the extent to which social and cultural context influences people's thoughts on legalization and how these attitudes may vary depending on generation, education or social environment.

Result: The research included 210 respondents. The demographic data, attitudes and awareness of the respondents about the therapeutic use of cannabis were analyzed, including their familiarity with the pharmacological forms of cannabis and potential therapeutic effects. The research showed that the majority of the respondents positively assess the therapeutic effect of cannabis, while there is uncertainty among a small part of the population who still feel insufficiently informed.

Conclusion: The research provided insight into the attitudes of society towards the legalization of cannabis, confirming the hypothesis that the majority of the public has a positive attitude towards its therapeutic use. However, it indicates the need for additional education and reduction of uncertainty among citizens regarding its effect and potential risks.

Keywords: cannabis, therapeutic use of cannabis, attitudes, education, abuse

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INTRODUCTION

Cannabis is a plant that has a dual botanical classification and belongs to the hemp family (*Cannabaceae*). There are three main species: industrial hemp (*Cannabis sativa* L.), Indian hemp (*Cannabis indica* Lamarck) and wild hemp (*Cannabis ruderalis* Janischevske). Each species has specific characteristics, both in appearance and in chemical composition (phytocannabinoids, such as THC and CBD). Cannabis is the name of the genus of the plant, and hemp refers to the industrial variety that contains up to 0.2% THC, which is legally permitted. Marijuana is a psychoactive drug that comes from the dried parts of the cannabis plant, and “skunk” and “hashish” are different cannabis products with a higher THC content. Marijuana is mainly consumed by smoking, while hashish can also be used in food or drinks, and is also used in the form of tinctures (1). Medical cannabis is cannabis and cannabinoids that doctors prescribe to their patients (2). Cannabinoids are natural compounds found in the cannabis plant. The most important cannabinoids from a medical perspective are THC (tetrahydrocannabinol) and CBD (cannabidiol). All cannabinoids are naturally present in the plant in the form of acids, such as THCA (tetrahydrocannabinolic acid) and CBDA (cannabidiolic acid). These acids only become active when exposed to heat or light through a process called decarboxylation, which means that cannabis must be thermally processed to produce psychoactive effects. When cannabis is taken orally, the absorption of THC is much slower, with the effects felt after 30 minutes to 2 hours (3).

The first cannabis-based medicine, known as Sativex, was registered in 2005, and more and more countries are now legalizing the medical use of cannabis, allowing patients to access its medicinal properties (4). Cannabis abuse has been a serious global problem for many years.

This abuse includes both the illegal production and trafficking of cannabis. If demand increases, this could reduce illegal production, but it will also raise the issue of government control. It is also possible that counterfeit and illegally manufactured products will appear on the market, which could attract buyers due to their lower price (5).

Scientific research on the effects of cannabinoids and cannabis has covered a variety of medical conditions, and the conclusions have generally shown that although cannabis cannot cure the underlying disease, in many cases it can alleviate symptoms. Medical cannabis contains active substances called cannabinoids, and the most commonly used drugs are (6):

1. Dronabinol, which is a synthetic form of THC and comes in 2.5 mg, 5 mg, and 10 mg capsules.
2. Nabilon, a synthetic cannabinoid, where 1 mg of nabilone has the same effect as 7-8 mg of dronabinol, also comes in capsule form.
3. Nabiximol, a spray that is used by mouth and contains an extract of the cannabis plant, with a 1:1 ratio of THC and CBD (2,7 mg THC and 2,5 mg CBD-a).

Cannabinoids are not drugs that should be used as a first choice, but only when standard treatments have not yielded the expected results. Cannabis may also help with movement disorders, such as Parkinson's disease, Huntington's disease, or Tourette's syndrome, which cause motor and vocal tics (7).

The legalization of cannabis for medical purposes is currently a hot topic in Bosnia and Herzegovina (BiH), but there is also an ongoing expert debate on the need to change the law on psychoactive substances. The legal status of medical cannabis varies worldwide.

For example, in the USA, 23 states have legalized the use of marijuana for medical purposes, especially for the treatment of glaucoma, which has been confirmed by clinical trials. In the Netherlands, the law allows doctors to prescribe cannabis on prescription, but this is rarely done, probably due to a lack of information about the effects of cannabis on various diseases. In Bosnia and Herzegovina, the Pharmaceutical Chamber of the Federation of BiH has submitted an initiative to legalize cannabis for medical purposes to the Ministry of Civil Affairs and the Ministry of Security of BiH. An expert group is expected to be formed to assess the safety and need for this type of treatment. In Slovenia, the use of cannabis for medical purposes was legalized in 2014, and currently the medical use of cannabis is legal in 14 countries of the European Union (7). The main goal of this work is to examine the attitudes and thinking of society about the legalization of cannabis in BiH. Through the analysis of attitudes, the research will attempt to offer insight into possible guidelines for changes in the perception of imposed attitudes and societal influence.

MATERIALS AND METHODS

The research was conducted via an online survey designed to collect attitudes and opinions on the use of marijuana for medical

purposes and the process of cannabis legalization. Respondents of different age groups were surveyed, with inclusion criteria being internet access and voluntary participation, while exclusion criteria included an incompletely completed survey. The online survey contains predefined questions related to the research topic. The questions are structured to enable obtaining quantitative and qualitative data on the perceptions of different social groups. The research was conducted during the period from October 1 to November 1, 2024, and respondents accessed the survey via a digital platform that allows for anonymity. The data collected does not include personal information of the respondents, thus ensuring confidentiality and privacy protection. An appropriate statistical program was used to process the collected data. Statistical analysis includes descriptive statistics to display basic trends, while inferential statistics are used to analyze differences and connections within the data, in accordance with the research objectives.

RESULTS

Analysis of data on the gender of respondents in a sample of 210 participants (Figure 1) shows that a significantly higher proportion are women, representing 68% of the total sample, while men make up the remaining 32%.

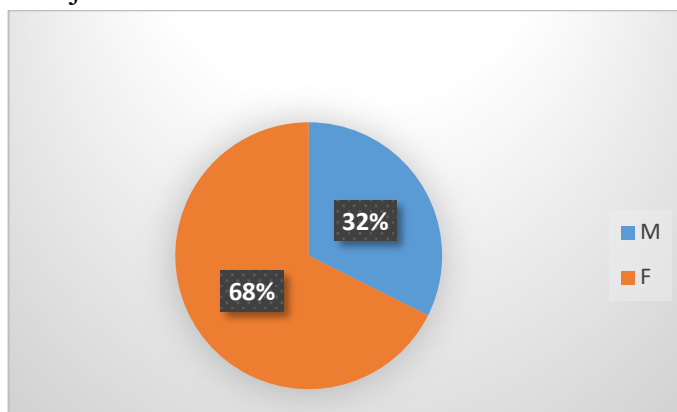


Figure 1. *Structure of respondents by gender*

The age structure of the respondents shows that the largest number of participants belongs to the group from 31 to 40 years old, which includes 57.6% of the total sample. This age group represents the dominant group in the research, which indicates that the middle-aged

population surveyed was the most interested or available to participate. The age group from 21 to 30 years old makes up 21.4% of the respondents, while those under 20 years old make up 10% of the total sample (Figure 2).

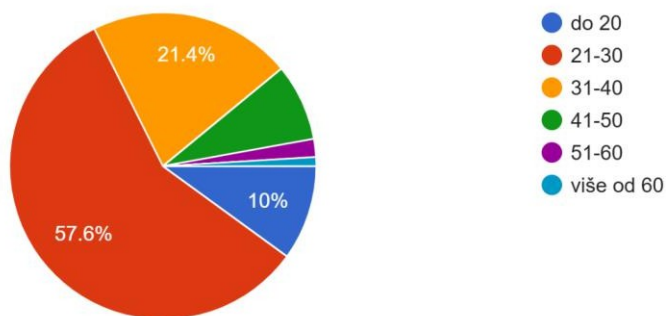


Figure 2. Age structure of respondents

The largest share of respondents has a university degree, accounting for 53.8% of the total number of respondents. These results indicate that the highly educated population is dominant among the research participants. In addition, 44.3% of respondents have a secondary education, and a smaller share of

respondents have a specialist or doctoral degree. On the other hand, primary education is not significantly represented in the sample, which may indicate that the population with lower educational levels was not the focus of the research or did not show interest in participating.

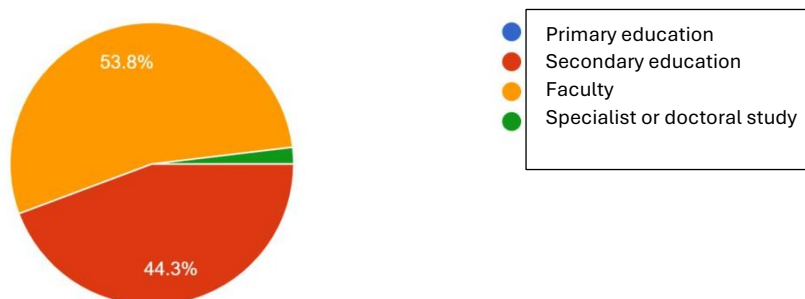


Figure 3. Educational structure of respondents

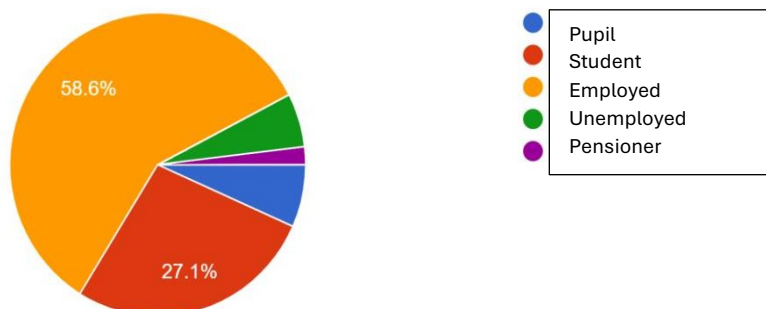


Figure 4. Employment of respondents

Of the total of 210 respondents, 58.6% are employed. Students are the second largest group with 27.1%, while pupils make up 6.7%. The unemployed participate with 5.7%, and the smallest number is retired with 1.9%. The results show the dominance of the working and student population in the research. The results of the survey show that the largest number of respondents live in the city (55.2%)

of the total number of respondents. Suburban settlements are the second most common place of residence with a share of 25.2%, while the village is the place of residence for 19.5% of respondents. These data indicate a greater representation of the urban population in the survey, while suburban and rural areas are less represented.

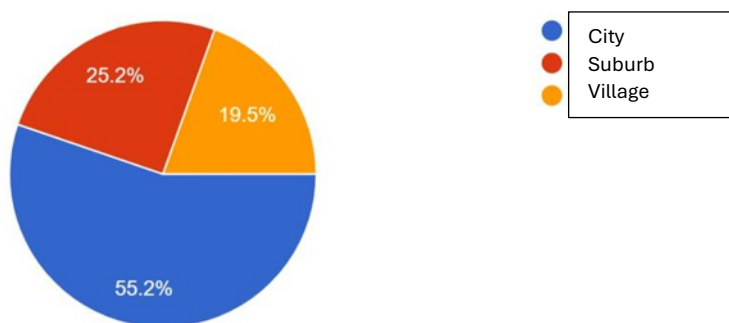


Figure 5. Place of residence of respondents

The results of the survey show different levels of familiarity of respondents with the medicinal effects of cannabis (Figure 6). Only 10.5% of respondents stated that they were very well informed (score 1). A score of 2 was given by 17.1% of respondents, indicating a moderate level of information. The largest

number of participants, 36.7%, assessed their familiarity as average (score 3). On the other hand, 17.1% of respondents considered their familiarity to be low (score 4), while 18.6% stated that they were insufficiently informed (score 5).

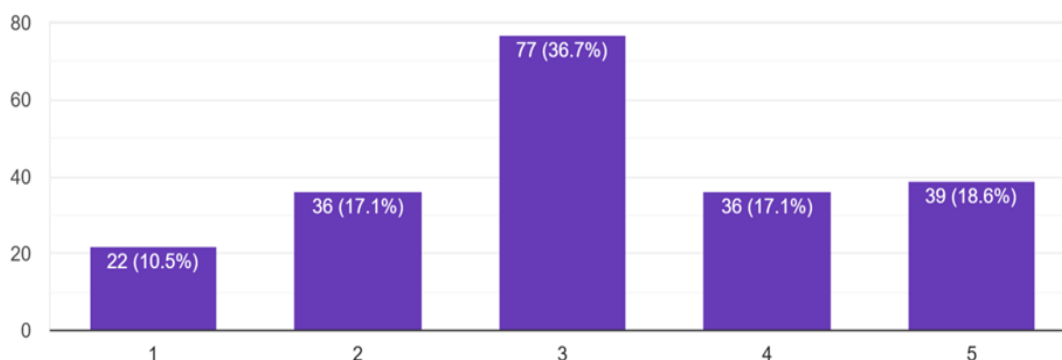


Figure 6. Respondents' familiarity with the medicinal effects of cannabis

The results of the survey show that the majority of respondents believe in the therapeutic effect of cannabis. 48.6% of respondents agree with this statement, while 16.2% completely agree, making a total of 64.8% of those with a positive attitude. On the other hand, 31.4% of respondents state that

they are not sure, which indicates a certain uncertainty and the need for additional information on this topic. A smaller proportion of respondents disagree, with 3.3% disagreeing and only 0.5% completely disagreeing with the statement about the therapeutic effect of cannabis (Figure 7).

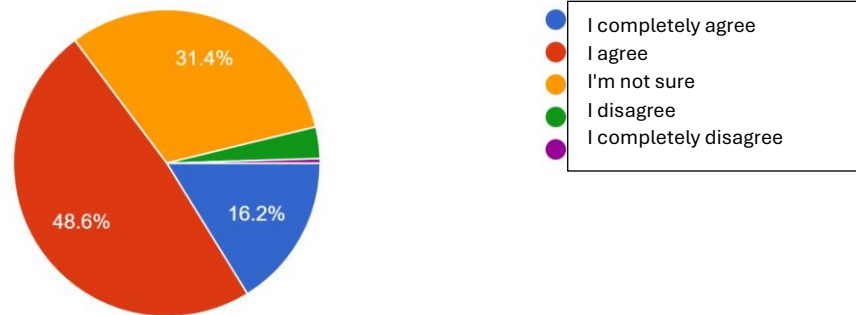


Figure 7. Respondents' views on the therapeutic effects of cannabis

The largest share, 48.6%, stated that they were not very familiar, while 6.2% stated that they were not familiar at all. On the other hand, 22.9% of respondents considered themselves

well familiar, while 15.2% stated that they were very well familiar. A smaller proportion of respondents stated that they were completely familiar (7.1%) (Figure 8).

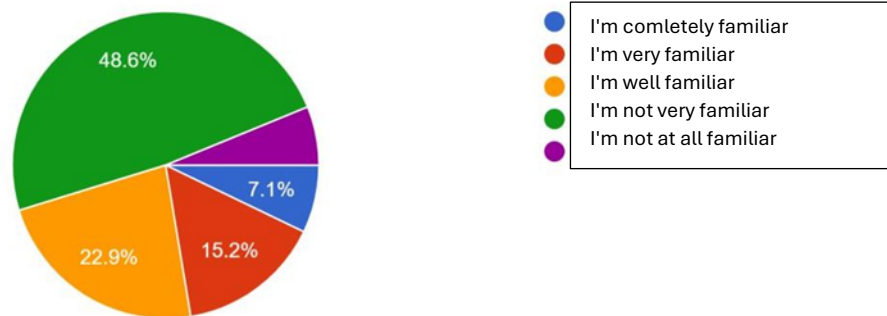


Figure 8. Respondents' familiarity with pharmacological forms of cannabis

31.4% of respondents know someone who suffers from such a condition, while 2.9% of respondents report a personal illness. On the other hand, 28.6% of respondents are not sure whether they know someone with such a medical condition, while 37.1% claim that they do not know anyone who suffers from it. The

results indicate that a significant portion of respondents have at least indirect experience with illnesses that could be treated with cannabis, while there is still a portion of the population that is unsure or has no such experience (Figure 9).

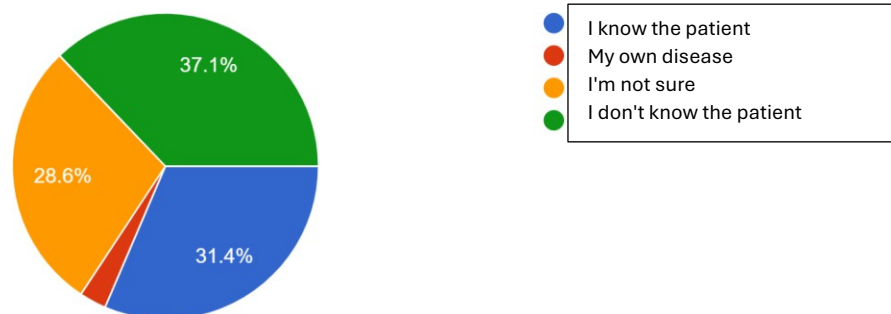


Figure 9. Knowledge of medical conditions that can be treated with cannabis

Figure 10 shows the views of respondents on whether the use of cannabis for medical

purposes can lead to addiction. The results show that 49% of respondents are not sure of

their position on this issue. Furthermore, 28.6% of respondents agree that the medical use of cannabis can cause addiction, while 3.8% of them fully confirm this. In contrast, 15.7% of respondents disagree with the statement, while 2.9% completely deny the

possibility of addiction. The results show divided opinions among the respondents, with almost half of them expressing uncertainty, while a smaller part of the population has expressed views for or against this statement.

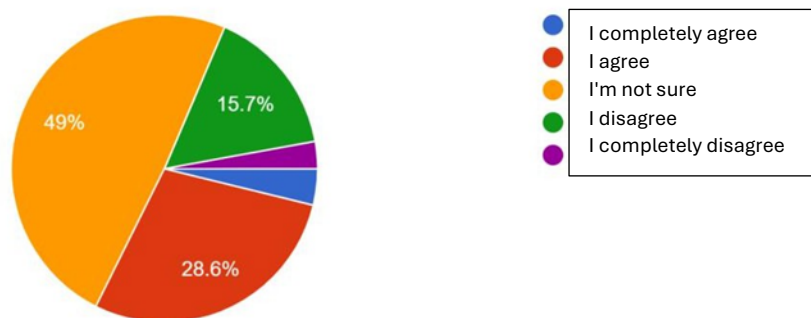


Figure 10. Respondents' views on addiction in the medical use of cannabis

Figure 11 shows respondents' views on the importance of clear guidelines for the therapeutic use of cannabis, including indications, pharmaceutical form and duration of use. The majority of respondents expressed a positive attitude towards this statement, with

39.5% agreeing, and an additional 29.5% strongly agreeing, while 26.2% of respondents were unsure. A smaller proportion of respondents expressed disagreement (3.8%) who disagreed and 1% who strongly disagreed.

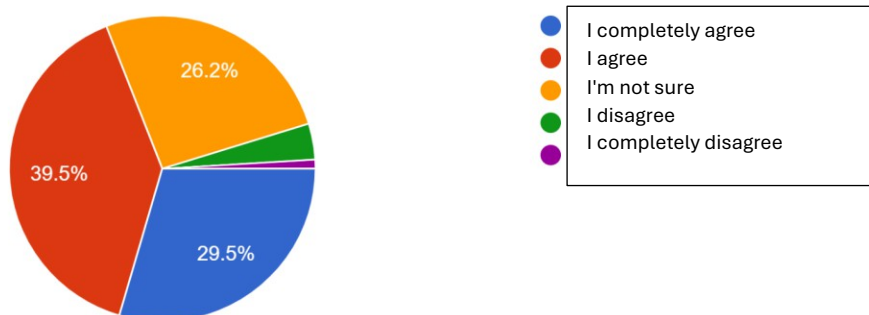


Figure 11. Respondents' views on the need for clearly defined guidelines for the therapeutic use of cannabis

Figure 12 shows the respondents' opinions on whether the therapeutic use of cannabis represents a better alternative to artificially produced drugs. The majority of respondents support this statement, with 37.6% agreeing and 13.3% completely agreeing. A significant part of respondents (41.9%) state that they are not sure, which indicates indecision or lack of information on this topic. A smaller share

expresses disagreement (6.2%) because they disagree with the statement, while only 1% strongly disagree. disagree with the statement, while only 1% strongly disagree.

Figure 13 shows the respondents' opinions on the justification of the use of cannabis in patients in the terminal phase of serious diseases.

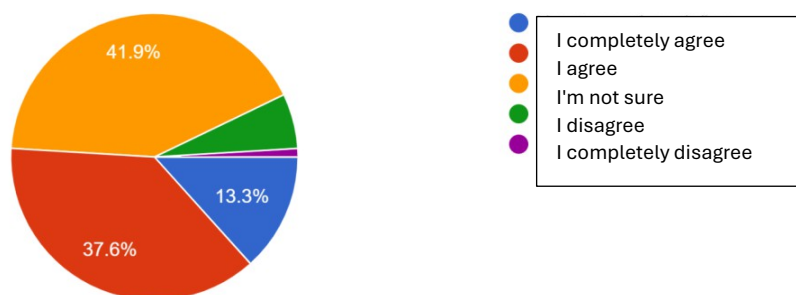


Figure 12. Attitudes towards cannabis as an alternative to synthetic drugs

The majority of respondents express support for this statement, with 40% agreeing, while 29.5% state that they completely agree. A certain part of respondents, 25.7% of them, points out that they are not sure of their position. A smaller number of respondents disagree (3.8%), while 1% do not fully support

this statement. The results clearly show that the majority of respondents consider the use of cannabis for therapeutic purposes justified for patients in the terminal phase of serious diseases, while a smaller part expresses opposition.

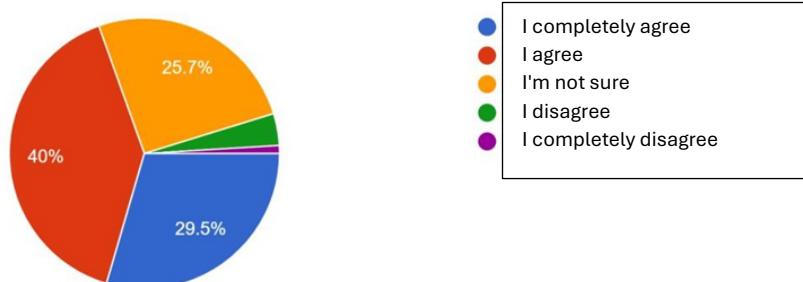


Figure 13. Respondents' views on the justification of the use of cannabis in patients in the terminal phase

Figure 14 shows the respondents' opinions on whether there is a possibility of cannabis abuse. The majority of respondents expressed concern, with 37.1% of respondents agreeing and an additional 22.4% fully agreeing with the statement that there could be abuse of

cannabis. Furthermore, 27.1% of respondents are not sure, and a smaller part of respondents expresses disagreement with 11.4% who disagree and 1% who completely reject this possibility. Most respondents recognize the potential risk of cannabis abuse.

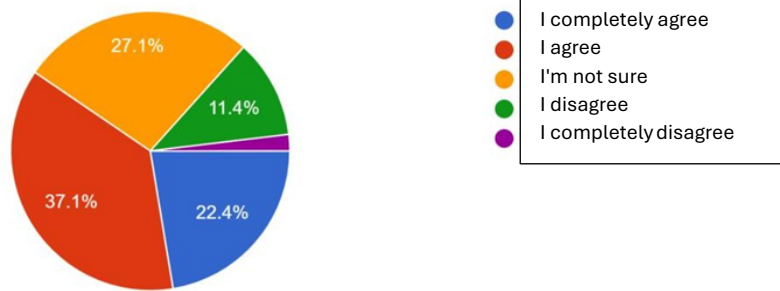


Figure 14. Respondents' views on the possibility of cannabis abuse

Figure 15 shows the respondents' views on the need for additional expert and scientific research into the use of cannabis and its preparations in treatment. The majority of respondents believe that such research is necessary (75.2%), which shows a broad

acceptance of the importance of further evaluation of this topic. On the other hand, 16.7% of respondents are not sure, and a smaller share of 8.1% believe that additional research is not necessary.

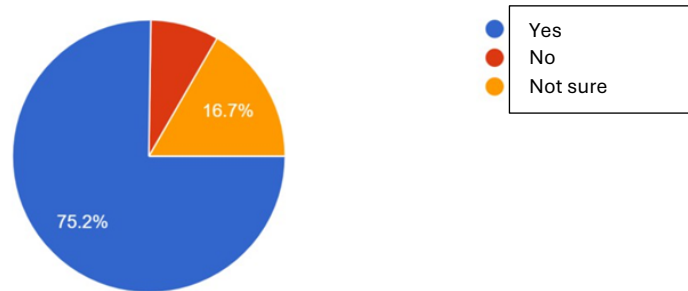


Figure 15. The need for additional professional and scientific testing of cannabis for medical purposes

Figure 16 shows the respondents' opinions on whether society's negative attitude towards marijuana is the result of insufficient information about cannabis. Most respondents agree with this statement, with 44.3% of respondents agreeing, while an additional 26.7% fully agree. A certain part of the respondents of 21.9% states that they are not

sure, and a smaller part expresses disagreement with 5.7% who do not agree and 1.4% who completely reject this statement. Lack of information is recognized as a significant cause of society's negative attitude towards marijuana, while a smaller part of the population is unsure about this statement.

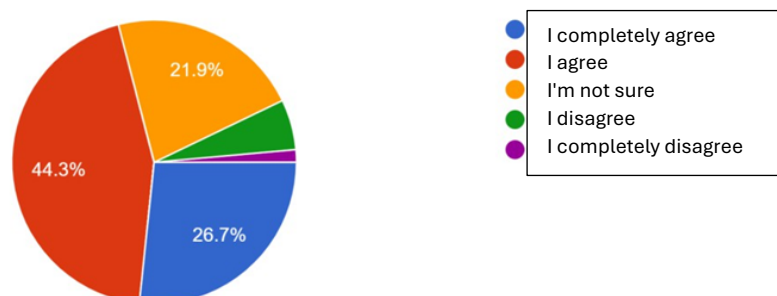


Figure 16. The influence of information on social attitudes about marijuana

A significant proportion of respondents support the idea of using marijuana for medical purposes, with 27.1% completely agreeing and 31.9% agreeing with the statement. A certain

proportion of respondents (29%) are not sure, and a smaller number of respondents express opposition to legalization, of which 8.1% disagree and 3.8% strongly disagree.

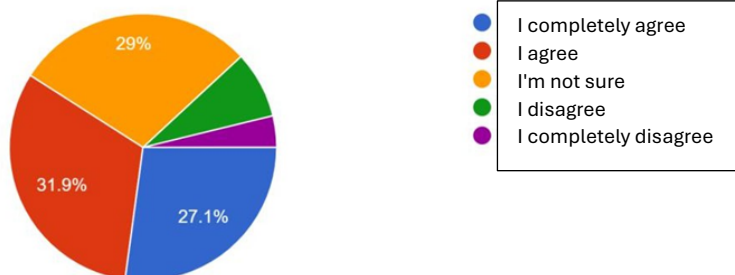


Figure 17. Respondents' views on the legalization of marijuana for medical purposes in Bosnia and Herzegovina

Figure 18 shows the results of a survey that asked respondents about their possible change in attitudes towards the use of cannabis for medicinal purposes if it were legalized. The results show that 41.4% of respondents believe

they would change their opinion, 24.8% would maintain their position, while 33.8% of respondents are unsure whether they would change their opinion.

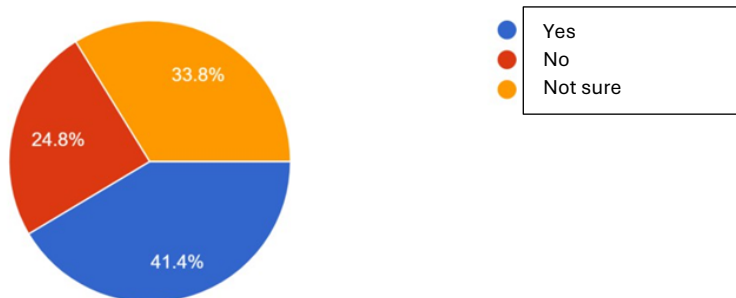


Figure 18. The impact of cannabis legalization on attitudes towards its use for medicinal purposes

DISCUSSION

The research shows that a significant number of respondents (64.8%) expressed a positive attitude towards the therapeutic use of cannabis, believing in its therapeutic effects. This positive attitude is also visible in the respondents' views on the justification of the use of cannabis in the terminal phase of the disease, where the majority (69.5%) supported this statement. In addition, the majority of respondents (69%) believe that the therapeutic use of cannabis should have clearly defined guidelines, which indicates their willingness to seriously consider the use of cannabis for

medical purposes. Although there is some uncertainty among the respondents, as evident from the 31.4% of respondents who are unsure about their attitude about the therapeutic effect of cannabis and the 49% of respondents who are unsure about the possibility of addiction in the medical use of cannabis, the majority still shows a positive attitude towards its use. The number of countries that legalize medical cannabis is increasing. According to the Law on Medicines (9), in Croatia, in 2015, the Ministry of Health regulations came into force, allowing the use of medical cannabis for patients with multiple sclerosis, cancer,

epilepsy and AIDS. The regulation stipulates that medicines containing THC, donabinol and nabilone can be dispensed in pharmacies only on prescription. In a survey conducted among the Slovenian population, 81% of respondents in the general population support the use of cannabis for medical purposes (10). Also, on 9 June 2024, a referendum was held in the Republic of Slovenia, in which citizens expressed their views on several issues, including allowing the cultivation and processing of cannabis for medical purposes. 66.71% of voters voted in favor of the medical use of cannabis. A survey of attitudes towards medical cannabis was conducted in Belgrade with the help of the health centre, and the results showed a positive public attitude towards the legalization of medical cannabis (11). A survey among medical students in the Republic of Serbia showed that 63.4% of students support the legalization of medical cannabis (12). Some countries have more restrictive laws that allow the use of isolated cannabinoid medicines (13). In Canada (14), Uruguay and the Netherlands (15), cannabis can be purchased without a prescription. In Mexico, the THC content of medical cannabis is limited to one percent (16). The same limit applies in Switzerland, but no prescription is required for purchase (17). Medical research into the use of cannabis as a treatment for various health conditions is becoming more common (18), and reasons for this trend include the growing support for cannabis use, the trend towards legalization, and the perception of medical use of cannabis.

CONCLUSIONS

The majority of respondents believe in the therapeutic effects of cannabis, although there was some uncertainty about its potential negative effects, such as the possibility of addiction. Respondents expressed a need for clear guidelines regarding the therapeutic use




of cannabis, including indications, pharmaceutical form and duration of use. Also, the majority believe that cannabis could represent a better alternative to artificially produced drugs, but there is also a significant number of those who are unsure of their assessment. The research showed that the majority of respondents support the therapeutic use of cannabis. Attitudes are generally positive, but there is also significant uncertainty and a need for further information about the medicinal properties of cannabis and its pharmacological forms. Although the results of the research are significant, additional research is needed to better understand the factors that influence society's attitudes towards the legalization of cannabis. Also, future research could focus on deeper analyses of the relationship between information and attitudes and the influence of different sources of information on the formation of opinions about cannabis. The research provided insight into society's attitudes towards the legalization of cannabis, confirming the hypothesis that the majority of the public has a positive attitude towards its therapeutic use. However, it indicates the need for additional education and reduction of uncertainty among citizens regarding its performance and potential.

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ISPITIVANJE JAVNOG MIŠLJENJA O LEGALIZACIJI KANABISA

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SAŽETAK

Uvod: Kanabinoidi su prirodni spojevi prisutni u biljkama porodice kanabisa. Najvažniji kanabinoidi iz medicinske perspektive su THC (tetrahidrokanabinol) i CBD (kanabidiol). Pravilna doza i odgovarajuća učestalost primjene su uspješne pri upotrebi kanabisa kao lijeka u medicinske svrhe.

Cilj: Dublje razumjeti stavove i razmišljanja društva o legalizaciji kanabisa u BiH s posebnim naglaskom na predrasude koje su se razvile kroz utjecaj pravnog i društvenog sustava. Također, cilj je utvrditi u kojoj mjeri društveni i kulturni kontekst utječu na razmišljanja ljudi o legalizaciji te kako ti stavovi mogu varirati ovisno o generaciji, obrazovanju ili društvenom okruženju.

Rezultat: Istraživanje je obuhvatilo 210 ispitanika. Analizirani su demografski podaci, stavovi i informiranost ispitanika o terapijskoj primjeni kanabisa, uključujući njihovu upoznatost s farmakološkim oblicima kanabisa i potencijalnim terapijskim učincima. Istraživanje je pokazalo da većina ispitanika pozitivno ocjenjuje terapijski učinak kanabisa, dok postoji nesigurnost među manjim dijelom populacije koji se još uvijek osjećaju nedovoljno informiranim.

Zaključak: Istraživanje je pružilo uvid u stavove društva prema legalizaciji kanabisa potvrđujući hipotezu da većina javnosti ima pozitivan stav prema njegovoj terapijskoj primjeni. Međutim, ukazuje na potrebu za dodatnim edukacijama i smanjenju nesigurnosti među građanima u vezi s njegovim učinkom i potencijalnim rizicima.

Ključne riječi: kanabis, terapijska primjena kanabisa, stavovi, edukacija, zloupotrebe

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